

Claims

1. A biometric information recognition credit card system, comprising:

a plurality of credit cards each storing therein credit card information including a

5 credit card number;

a plurality of credit card scanners each having a keypad adapted to input sales details, a card information input unit adapted to read credit card information from each of the credit cards, a biometric information input unit adapted to read biometric information of each of credit card holders, a sales slip output unit adapted to output a sales slip, a communication unit adapted to transmit/receive data to/from credit card company servers, a display unit adapted to display various pieces of information, and a control unit adapted to separate biometric information input from the biometric information input unit and transmit separated biometric information to a separated biometric information management center through the communication unit, to transmit sales information input through the keypad and the credit card information provided from the credit card to a corresponding credit card company server through the communication unit, and to control the sales slip output unit to output a sales slip on the basis of authentication results, provided from the credit card company server, and biometric information authentication results, provided from the separated biometric information management center;

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one or more credit card company servers each transmitting data indicating whether to approve use of each of the credit cards to a corresponding credit card scanner depending on authentication results of the credit card information received from the credit card; and

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the separated biometric information management center separately storing therein biometric information of each of credit card holders, comparing separated biometric

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information received from the credit card scanner with the separately stored biometric information when receiving the separated biometric information, and transmitting the biometric information authentication results depending on whether the received biometric information is identical with the separately stored biometric information.

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2. The biometric information recognition credit card system according to claim 1, wherein:

the credit cards each store therein a part of biometric information of each of the credit card holders; and

10 the credit card scanners each transmits the separated biometric information, the sales information, and the credit card information only when the part of the biometric information stored in the credit card is identical with a corresponding part of the separated biometric information.

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3. The biometric information recognition credit card system according to claim 2, wherein the credit card scanners each transmits remaining parts of the separated biometric information except for the corresponding part.

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4. The biometric information recognition credit card system according to claim 1,

wherein:

the credit cards each store therein a part of biometric information of each of the credit card holders; and

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the credit card scanners each transmit the part of the biometric information stored in the credit card together with the separated biometric information to the separated biometric information management center.

5. The biometric information recognition credit card system according to claim 4,
wherein the separated biometric information management center compares the separated
biometric information received from a corresponding credit card scanner with both the part
of the biometric information stored in the credit card and the biometric information
separately stored in the separated biometric information management center, and transmits
biometric information authentication results to a corresponding credit card company server
depending on whether the two pieces of biometric information are identical with each
other.

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6. The biometric information recognition credit card system according to claim 1,
wherein:

15 the separated biometric information management center stores parts of the
separated biometric information of each of the credit card holders in a plurality of
separated biometric information storage servers connected to the separated biometric
information management center through a network; and

20 the separated biometric information management center compares parts of the
separated biometric information received from the credit card scanner with the parts of the
biometric information separately stored in the plurality of separated biometric information
storage servers.

25 7. The biometric information recognition credit card system according to claim 6,
wherein the separated biometric information management center is operated so that, at the
time of comparing the biometric information, it combines the parts of the separated
biometric information received from the credit card scanner into original biometric

information, combines the parts of the biometric information separately stored in the plurality of separated biometric information storage servers into original biometric information, and compares the two pieces of original biometric information with each other.

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8. The biometric information recognition credit card system according to claim 1, wherein:

the separated biometric information management center stores parts of the separated biometric information of each of the credit card holders in a plurality of separated biometric information storage servers connected to the separated biometric information management center through a network;

the separated biometric information management center transmits the respective parts of the separated biometric information received from the credit card scanner to the separated biometric information storage servers storing corresponding parts of the separated biometric information, respectively, of the plurality of separated biometric information storage servers;

the separated biometric information storage servers compare the parts of the separated biometric information received from the credit card scanner with the corresponding parts of the separated biometric information stored therein, respectively, and transmit the comparison results to the separated biometric information management center; and

the separated biometric information separation management center transmits biometric information authentication results, indicating that the two pieces of biometric information are identical with each other, to the credit card scanner when all comparison results from the separated biometric information storage servers indicate identities.

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9. The biometric information recognition credit card system according to claim 1, wherein:

the separated biometric information management center is connected to the credit card company servers;

the separated biometric information received from the credit card scanner is transmitted to the separated biometric information management center through a corresponding credit card company server; and

the biometric information authentication results provided from the separated biometric information management center are transmitted to the credit card scanner through the credit card company server.

10 10. The biometric information recognition credit card system according to claim 9, wherein the credit card company server, having received the biometric information authentication results from the separated biometric information management center, combines the biometric information authentication results with data indicating whether use of the credit card is approved, and transmits the combined results to the credit card scanner.

20 11. A biometric information recognition credit card system, comprising:

a plurality of credit cards each storing therein credit card information including a credit card number;

25 a plurality of credit card scanners each having a keypad adapted to input sales details, a card information input unit adapted to read credit card information from each of the credit cards, a biometric information input unit adapted to read biometric information

of each of credit card holders, a sales slip output unit adapted to output a sales slip, a communication unit adapted to transmit/receive data to/from credit card company servers, a display unit adapted to display various pieces of information, and a control unit adapted to transmit biometric information input from the biometric information input unit to a
5 separated biometric information management center through the communication unit, to transmit sales information input through the keypad and the credit card information provided from the credit card to a corresponding credit card company server through the communication unit, and to control the sales slip output unit to output a sales slip on the basis of authentication results, provided from the credit card company server, and
10 biometric information authentication results, provided from the separated biometric information management center;

one or more credit card company servers each transmitting data indicating whether to approve use of each of the credit cards to a corresponding credit card scanner depending on authentication results of the credit card information received from the credit
15 card; and

the separated biometric information management center separately storing therein biometric information of each of credit card holders, comparing the biometric information received from a corresponding credit card scanner with the separately stored biometric information, and transmitting biometric information authentication results to the credit card
20 scanner depending on whether the received biometric information is identical with the separately stored biometric information.

12. The biometric information recognition credit card system according to claim
11, wherein:

25 the credit cards each store therein a part of biometric information of each of the

credit card holders; and

the credit card scanners each transmits a part of the biometric information stored in the credit card together with the received biometric information to the separated biometric information management center.

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13. The biometric information recognition credit card system according to claim 12, wherein the separated biometric information management center separates the biometric information received from the credit card scanner, compares the separated biometric information received from a corresponding credit card scanner with both the part 10 of the biometric information stored in the credit card and the biometric information separately stored in the separated biometric information management center, and transmits biometric information authentication results depending on whether the two pieces of biometric information are identical with each other.

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14. The biometric information recognition credit card system according to claim 11, wherein:

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the separated biometric information management center stores parts of the separated biometric information of each of the credit card holders in a plurality of separated biometric information storage servers connected to the separated biometric information management center through a network; and

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the separated biometric information management center separates the biometric information received from the credit card scanner, and compares parts of the separated biometric information received from the credit card scanner with parts of the biometric information separately stored in the plurality of separated biometric information storage servers.

15. The biometric information recognition credit card system according to claim
11, wherein:

the separated biometric information management center is connected to a plurality
5 of separated biometric information storage servers storing therein corresponding parts of
the separated biometric information of each of the credit card holders, respectively; and

the separated biometric information management center combines parts of the
biometric information, separately stored in the plurality of separated biometric information
storage servers, into original biometric information, and compares the original biometric
10 information with the biometric information received from the credit card scanner.

16. The biometric information recognition credit card system according to claim
11, wherein:

the separated biometric information management center stores parts of the
15 separated biometric information of each of the credit card holders in a plurality of
separated biometric information storage servers connected to the separated biometric
information management center through a network;

the separated biometric information management center separates the biometric
information received from the credit card scanner, transmits respective parts of the
20 separated biometric information to the separated biometric information storage servers
storing corresponding parts of the separated biometric information, respectively, of the
plurality of separated biometric information storage servers;

the separated biometric information storage servers compare the parts of the
biometric information received from the credit card scanner with the corresponding parts
25 of the separated biometric information stored therein, respectively, and transmit the

comparison results to the separated biometric information management center; and

the separated biometric information separation management center transmits biometric information authentication results, indicating that the two pieces of biometric information are identical with each other, to the credit card scanner when all comparison results from the separated biometric information storage servers indicate identities.

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17. The biometric information recognition credit card system according to claim 11, wherein:

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the separated biometric information management center is connected to the credit card company servers;

the biometric information received from the credit card scanner is transmitted to the separated biometric information management center through a corresponding credit card company server; and

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the biometric information authentication results provided from the separated biometric information management center are transmitted to the credit card scanner through the credit card company server.

18. The biometric information recognition credit card system according to claim 17, wherein the credit card company server, having received the biometric information 20 authentication results from the separated biometric information management center, combines the biometric information authentication results with data indicating whether use of the credit card is approved, and transmits the combined results to the credit card scanner.

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19. A biometric information recognition credit card system, comprising:

a plurality of credit cards each storing therein credit card information including a credit card number;

5 a plurality of credit card scanners each having a keypad adapted to input sales details, a card information input unit adapted to read credit card information from each of the credit cards, a biometric information input unit adapted to read biometric information of each of credit card holders, a sales slip output unit adapted to output a sales slip, a communication unit adapted to transmit/receive data to/from credit card company servers, a display unit adapted to display various pieces of information, and a control unit adapted to receive parts of separately stored biometric information from a separated biometric 10 information management center, to combine the parts of the biometric information into original biometric information, to compare the original biometric information with received biometric information of a credit card holder, to transmit sales information input through the keypad and the credit card information received from the credit card to a corresponding credit card company server through the communication unit when the 15 original biometric information and the received biometric information are identical with each other, and to control the sales slip output unit to output a sales slip on the basis of authentication results provided from the credit card company server;

one or more credit card company servers each transmitting data indicating whether to approve use of each of the credit cards to a corresponding credit card scanner 20 depending on authentication results of the credit card information received from the credit card; and

the separated biometric information management center separately storing therein biometric information of each of credit card holders, and transmitting separately stored biometric information of a corresponding credit card holder to the credit card scanner in 25 response to a request received from the credit card scanner.

20. The biometric information recognition credit card system according to claim 19, wherein:

the credit cards each store therein a part of biometric information of each of the
5 credit card holders; and

the credit card scanners each combine the separately stored biometric information provided from the separated biometric information management center and the part of the biometric information stored in the credit card into original biometric information.

10 21. A credit card scanner, comprising:

a keypad adapted to input sales details;
a card information input unit adapted to read credit card information from each of the credit cards;

a biometric information input unit adapted to read biometric information of each of credit card holders;

a sales slip output unit adapted to output a sales slip;
a communication unit adapted to transmit/receive data to/from credit card company servers;

a display unit adapted to display various pieces of information; and
20 a control unit adapted to separate biometric information input from the biometric information input unit and transmit separated biometric information, sales information input through the keypad, and the credit card information provided from the credit card to a corresponding credit card company server through the communication unit, and to control the sales slip output unit to output a sales slip on the basis of authentication results,
25 provided from the credit card company server.

22. The credit card scanner according to claim 21, wherein:

the card information input unit reads a part of the biometric information of the credit card holder stored in the credit card; and

5 the control unit is operated so that, when the part of the biometric information stored in the credit card is identical with a corresponding part of the separated biometric information, the control unit transmits remaining parts of the separated biometric information except for the corresponding part thereof, sales information, and credit card information.